

WHAT IS CLAIMED IS:

1. A method of closing a patent foramen ovale having a septum primum and a septum secundum, comprising:

delivering an elongate body having a proximal end and a distal end to the patent foramen ovale, the elongate body having a tissue piercing structure at its distal end and a coil releasably engaged with the elongate body;

advancing the tissue piercing structure and the coil through the septa of the patent foramen ovale; and

releasing the coil from the elongate body and withdrawing the tissue piercing structure from the septa of the patent foramen ovale, wherein the coil when released contracts to pinch the septum primum and the septum secundum together.

2. The method of Claim 1, wherein the elongate body includes an opening near its distal end.

3. The method of Claim 2, wherein the coil has a distal end that releasably engages the opening in the elongate body near its distal end.

4. The method of Claim 3, wherein a loading portion releasably engages a proximal end of the coil, the coil being advanced through the patent foramen ovale while the coil is engaged with both the loading portion and the opening near the distal end of the elongate body to axially elongate and radially reduce the coil.

5. The method of Claim 1, further comprising delivering a loading collar with the elongate body to the patent foramen ovale, the loading collar releasably engaging a proximal end of the coil.

6. The method of Claim 5, wherein the elongate body is rotatable relative to the loading collar.

7. The method of Claim 5, wherein the elongate body is axially slideable relative to the loading collar.

8. The method of Claim 5, wherein the elongate body is advanced relative to the loading collar prior to advancing the coil to axially elongate the coil.

9. The method of Claim 1, wherein the elongate body is delivered through an outer catheter.

10. The method of Claim 1, wherein the tissue piercing structure and the coil are delivered first through the septum secundum and then through the septum primum.

11. The method of Claim 1, wherein the coil is a first coil, and further comprising, after releasing the first coil from the elongate body and withdrawing the tissue piercing structure from the septa of the patent foramen ovale:

advancing the tissue piercing structure and a second coil releasably engaged with the elongate body through the septa of the patent foramen ovale at a location adjacent to the first coil; and

releasing the second coil from the elongate body and withdrawing the tissue piercing structure from the septa of the patent foramen ovale, wherein the second coil when released contracts to pinch the septum primum and the septum secundum together.

12. A method of closing a patent foramen ovale having a septum primum and septum secundum, comprising advancing a plurality of coils at least partially through the septa of the patent foramen ovale to secure the septum primum and septum secundum together.

13. The method of Claim 12, wherein the plurality of coils are advanced sequentially through a single catheter.

14. The method of Claim 12, wherein the plurality of coils are each advanced first through the septum secundum and then through the septum primum.

15. The method of Claim 12, wherein the plurality of coils are each advanced first through the septum primum and then through the septum secundum.

16. The method of Claim 12, wherein each of the coils is provided over a single elongate body and is advanced through the patent using a tissue piercing structure on the distal end of the elongate body.

17. The method of Claim 12, wherein each of the coils after being advanced through the septa of the patent foramen ovale has a first end in the septum primum and a second end in the septum secundum.

18. The method of Claim 12, wherein each of the coils after being advanced through the septa of the patent foramen ovale has a first end in the left atrium and a second end in the right atrium.

19. The method of Claim 12, comprising advancing at least three coils through the septa of the patent foramen ovale.

20. An assembly for delivering a coil through tissue in a patient, comprising:  
a loading portion adapted to releasably engage a proximal end of the coil; and  
a tissue piercing structure adapted to releasably engage a distal end of the coil,  
wherein the loading portion holds the coil relative to the tissue piercing structure to axially elongate and radially reduce the coil.

21. The assembly of Claim 20, wherein the loading portion is integral with the tissue piercing structure.

22. The assembly of Claim 21, wherein the loading portion comprises a slot adapted to receive the proximal end of the coil.

23. The assembly of Claim 21, wherein the tissue piercing structure includes an opening adapted to releasably engage the distal end of the coil.

24. The assembly of Claim 20, wherein the loading portion comprises a loading collar, and the tissue piercing structure is moveable relative to the loading collar to axially advance and rotate the distal end of the coil relative to the proximal end of the coil to axially elongate the coil.

25. The assembly of Claim 24, wherein the tissue piercing structure is provided on an elongate body having a proximal end and a distal end, the elongate body extending through the loading collar.

26. The assembly of Claim 20, further comprising a coil having a proximal end releasably engaging the loading portion and a distal end releasably engaging the tissue piercing structure.

27. The assembly of Claim 26, wherein the proximal end of the coil comprises a tang that extends into a diameter defined by the coil.

28. The assembly of Claim 26, wherein the distal end of the coil comprises a tang that extends into a diameter defined by the coil.

29. The assembly of Claim 20, wherein the coil is sized to extend through a septum primum and a septum secundum of a patent foramen ovale.

30. The assembly of Claim 20, wherein the loading portion is adapted to releasably engage a plurality of coils.